

Pacific Islands Fishery News



Newsletter of the Western Pacific Regional Fishery Management Council

Spring 1999

Modern Spearfishing: A Risky Business

Spearfishing for coral reef fishes is one of the oldest traditional fishing methods in the Pacific. In the past, the effects of spearfishing were minimal as fishers were limited to spearfishing from the surface or in relatively shallow waters accessible by free-diving. Over the past half century, however, spearfishing potential has been greatly enhanced by new technology, including scuba gear, powerful underwater flashlights, spear guns, "Hawaiian slings" (catapults to propel steel spears) and bang sticks (devices employing 12-gauge shotgun cartridges that can stop even sharks and large fish). Throughout the Pacific, the efficiency of modern spearfishing has created concern both for fish and for divers.

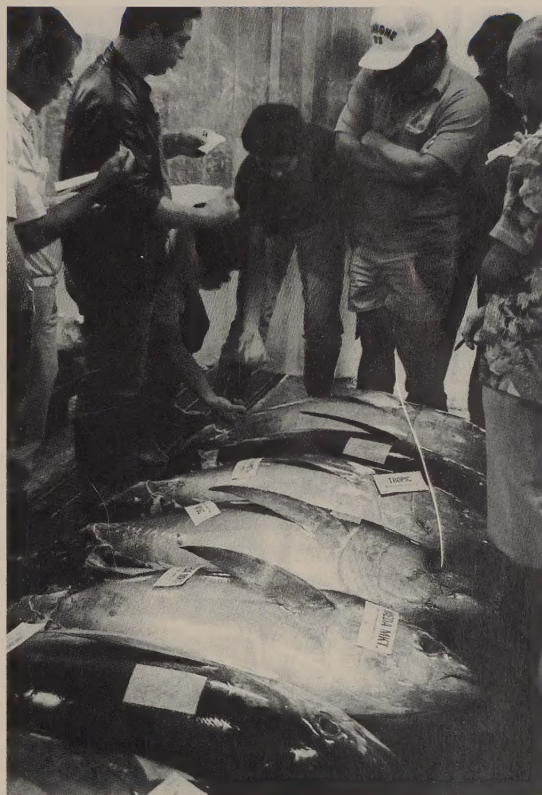
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Marketing Fish in the Western Pacific Region

Fishers in the Western Pacific Region have a variety of venues for marketing their catch. It can be sold *through* an auction or *to* a wholesaler, restaurant, retailer, peddler, cooperative or other arrangement. The decision is an individual one producers make based on price, convenience and other considerations.

In Hawaii, fish auctions are an important marketing venue and one that is not available to fishers in many other parts of the United States. In the auctions, all levels of the seafood market are represented, from the large wholesalers to the private consumer. For each fish or lot of fish, the auctioneer calls out the name and the weight of the fish to be sold and solicits an opening bid from the buyers. At times, the bid changes many times with multiple bidders involved.

The largest auction in the state is located in Honolulu on the island of Oahu. Established in 1952, the United Fishing Agency (UFA) today auctions as little as a few thousand pounds to as much as 160,000 pounds of fish on a given day. Producers are charged a percentage (usually 10 percent) of gross sales for its services. Auctioning usually begins at 5:30 a.m. Monday through



Buyers bid for high-grade tuna at the United Fishing Agency auction in Honolulu. —Sylvia Spalding photo

Saturday. UFA provides services to longline, deep-sea bottomfish and small-boat commercial fisheries both local and foreign. Its trucks pick up fish from local longline and large deep-sea bottomfish vessels and commercial air carriers used by Neighbor Island producers and importers. UFA also assists importers with the paperwork and documents necessary to obtain U.S. Customs clearance through a customs brokerage firm.

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A second Hawaii auction is located in Hilo on the east side of the Big Island. Established in 1914, Suisan Fish Auction Market provides services to small-boat bottomfish, trolling and handline fishers as well as commercial shoreline fishers and occasional longliners. It also has an office in Kona where small-boat commercial fishers on the west side of the island can deliver fish to be trucked to Hilo to be auctioned on the following day. The auction is open 5 a.m.–3:30 p.m. Monday-Saturday and charges a 10 percent auction fee.

Hawaii also has cooperatives that market fish. Unlike a business company, a cooperative is a corporation that is owned and controlled by the people who use its services. Cooperatives allow fishing operations to take advantage of economies of scale and reduce their input expenses, such as the cost of fuel, ice or other supplies.

Fishers on the island of Molokai sell their catch at the Molokai Ice House. After five years of organizing and building, the Ice House opened its doors in 1993. Located at the end of the Kaunakakai pier, it purchases and retails fish seven days a week. Prices are established by the manager based on size, quality and market conditions. The approximately 200 members of the cooperative are able to sell fish at the docks and buy ice at a reduced price (a large bag is \$4/member and \$6/nonmember).

Purchasing, marketing and handling of fish and discounted purchases of supplies, machinery and equipment are also the incentives behind the Guam Fishermen's Cooperative Association. Begun in 1976 with

about a dozen members, it now boasts approximately 160 participants.

Members save about 15 cents per gallon of fuel, 35 cents per bag of ice and a 50 percent discount on oil. The co-op sells about 90 percent of its product as sashimi and so maintains a high product-quality standard. It works with other organizations to provide its members with workshops, programs and seminars on issues such as seafood quality, boating safety and vessel financing. The co-op's goal is to build a \$2.5 million structure that will include a processing facility to quick freeze seafood, fish retail outlet, ice plant, restaurants and office space.

Future fish marketing developments in the Western Pacific Region include a fish processing and marketing operation in American Samoa, a central seafood market for the Northern Mariana Islands and a Domestic Commercial Fishing Village in Hawaii.

The private, nonprofit organization Tatua Samoa received a grant from the Administration of Native Americans last year to set up the fish operation on Tutuila. One of the purposes of the new facility is to assist local fishers in selling their catch in local and overseas markets.

Plans for a central seafood market in Saipan are on the drawing board at the NMI Department of Lands and Natural Resources. The government operation would need to get land



The Guam's Fishermen's Cooperative Association offers its 160 members purchasing, marketing and fish handling services as well as discounted fishing supplies and equipment. The co-op's goal is to build a \$2.5 million structure that will include seafood processing and storage facilities, retail outlets and restaurants.

appropriated, building funds and personnel to become a reality. If constructed, it would be the only central seafood market in NMI.

The planned commercial fishing village near Piers 36 to 38 at Honolulu Harbor is designed to attract to one area the various commercial fish processing and wholesaling operations that are now scattered around Honolulu. This consolidation is expected to improve the quality of fish products in Hawaii as well as provide an interesting tourist attraction. United Fishing Agency and Pacific Ocean Producers are prospective tenants of land to be leased in the village by the Harbors Division of the Hawaii Department of Transportation (DOT). In addition, eight separate bays in a multi-user building constructed by the state government are to be leased for fish processing, wholesaling and retailing. Tenants for the multi-user building are expected to be selected by June or July. Persons interested in more information on this project should contact the Harbors Division at (808) 587-1945.

NWHI Lobster Season to Open With Permanent Rules

The Northwestern Hawaiian Islands 1999 lobster season opens July 1 with permanent rules for annual harvest by bank. The bank-specific quotas were implemented last season on a trial basis. For the 1999 season, the total harvest is limited to 243,100 lobsters with bank-specific quotas for Necker Island, Maro Reef, Gardner Pinnacles and all other remaining banks/areas. The bank-

specific quotas were initiated because a majority of the catch was previously being harvested from Necker alone.

In the 1998 fishery, the five participating boats in the fishery had taken the quotas for Necker, Maro and Gardner by Sept. 18. By the close of the season on Dec. 31, only 42 percent of the allocation from the remaining lobster grounds had been taken.

Dive fishing often occurs at night when many reef fish are the most vulnerable, sleeping or hiding under coral ledges and in holes. In Palau, for example, fishers using powerful underwater flashlights and spearguns have exploited large humphead parrotfish, which normally sleep in "dormitories" on the shallow reef. Faced with increasing fishing pressure, these as well as other fish species that normally inhabit the plateau crest and upper slope of reefs are driven to inhabit deeper waters further down the reef slope. Similar reports have been documented in French Polynesia, Wallis and Pohnpei.

As the fish move to deeper waters, so do the spearfishers. Increasingly dependant on scuba gear to reach these greater depths, the spearfishers take greater risks.

In Guam, commercial fishers use up to three 120-cubic-foot scuba tanks per diver per night and venture as deep as 180 feet on their first and second dives. Spearguns and bang sticks are used to maximize catches of popular humphead parrotfish and Napoleon wrasse. Spearfishers have experienced cases of the bends as well as a few emergency ascents due to regulator blowouts. The fishers must also combat strong currents and predatory tiger and reef sharks, which may steal their catches.

In Nauru, day and night scuba spearfishing grew in popularity in the 1970s and 1980s, with up to 30 people regularly fishing the reef slope. Over time, divers noted that stocks of snappers and groupers were depleted in shallow water and spearfishers increasingly harvested smaller specimens. As in Guam, snappers and grouper populations had retreated into deeper water. Expansion of dive fishing activity into these depths by uncertified divers led to several severe cases of the bends and the acquisition of a hyperbaric chamber by the Nauru hospital.

The threat to reef fishes posed by scuba spearfishers, particularly on small islands with high demand for

reef fish, have led some traditional chiefs and local governments to take or contemplate regulatory action to curb this method of fishing. On other islands, strong local support for spearfishing means that regulation is

unlikely. Without regulation, however, large snappers, groupers, parrotfish, wrasses and other reef fish will continue to live below their normal depth range and spearfishers will likely take increasing risks to hunt their quarry.

Coral Reef Update

The proposed Coral Reef Ecosystems Fisheries

Management Plan (FMP) for the Western Pacific Region is making headway. The Plan Team met Feb. 24–26 in Honolulu to discuss management unit species and taxa to be included and measures for specific management regulations. Initial proposed measures for the FMP include the following:

- permit for fishing with conditions
- permit for aquaculture of "live rock" and other marine species
- prohibition of harvest or possession of wild "live rock" or coral with exceptions
- certain anchoring prohibitions for fishing vessels
- list of allowable fishing gear types, subject to specific regulations
- prohibition of specific fishing methods/practices (e.g., scuba night spearfishing, hookah, poison, explosives, intoxicating substances)
- owner's permanent identification markings on any passive gears (e.g., derelict nets/lines)
- establishment of marine protected areas
- framework process to facilitate future regulatory adjustments

The Plan Team defined coral reef ecosystem as benthic habitat and resources 0 to 100 meters deep. It preliminarily identified essential fish habitat for coral reef resources as marine areas from the shoreline to the seaward extent of the exclusive economic zone in depths of 0 to 400 meters. Habitat areas of particular concern were identified generally as all hard bottom 0 to 100 meters deep and areas of source populations. The final draft is expected to be completed by September.

The U.S. Coral Reef Task Force held its second meeting March 5–6 on Maui. The Task Force adopted as one of its highest priority items a resolution to support, as a priority for new funding, the U.S. Islands Coral Reef Strategy proposed by island representatives at a Pacific Basin Development Council workshop in

1997. The resolution recognizes that coral reefs provide the basis for coastal fisheries and marine tourism and are of vital economic importance to the coastal states and territories of the United States including Florida, Hawaii, Puerto Rico, the Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands. It calls on federal agencies to work with the states, territories and commonwealths "as equal partners" to fully implement President Clinton's Executive Order 13089 issued last June that mandates the protection of U.S. coral reef ecosystems.

The Task Force also identified the following key actions to begin implementing:

- launch a comprehensive effort to map and assess U.S. coral reefs in the Pacific
- establish a coordinated network of coral reef protected areas
- implement a coordinated coral reef monitoring program
- coordinate efforts among federal, state, territory and other partners to build emergency response capabilities and restore injured coral reefs
- strengthen local and regional efforts to protect coral reefs

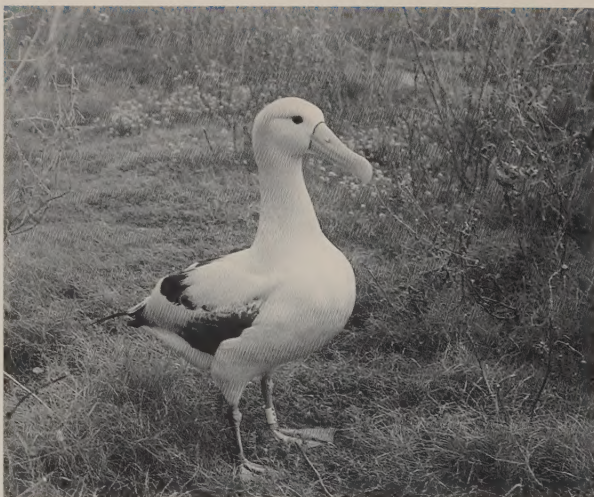
The Task Force endorsed the development of the Western Pacific Council's Coral Reef Ecosystem Fishery Management Plan and passed resolutions regarding imports of coral and coral reef species, coral bleaching and climate change and destructive fishing practices. For more on the Task Force, view the Web site at <http://coralreef.gov>.

A \$183 million initiative to protect oceans and coasts was announced by President Clinton in January. Of this amount, \$10.3 million is budgeted for coral reef restoration, \$25 million for fish habitat restoration, \$29 million for the National Marine Sanctuaries program and \$90 million for state Coastal Zone Management programs. Federal efforts to protect marine areas will be made through NOAA agencies.

Longline Interactions Addressed in Lawsuit, Biological Assessment

In February, the Center for Marine Conservation and the Sea Turtle Restoration Project filed a federal lawsuit against the National Marine Fisheries Service (NMFS). The suit alleges that the NMFS has violated the Endangered Species Act by allowing the Hawaii-based longline fishery to incidentally catch, and sometimes kill, endangered and threatened sea turtles without adequate biological opinions. The suit also alleges that NMFS violated the National Environmental Policy Act by failing to prepare a proper environmental impact statement (EIS) addressing potentially fatal interactions between turtles and Hawaii-based longliners. The suit seeks preparation of a proper biological opinion and an EIS that thoroughly analyzes the fishery's impacts on turtles and the environment. It also seeks to enjoin NMFS to comply fully with the laws. The date for the case to be heard in the U.S. District Court in Honolulu has not yet been set.

Also in February, the NMFS Pacific Islands Area Office completed a biological assessment on the effects of the Hawaii-based longline fishery on the short-tailed albatross around the Hawaiian Islands. The assessment found the risk to be extremely low. This risk will be reduced even further when the Council introduces regulations to reduce albatross-longline interactions. Informational meetings with longliners on the impending regulations are scheduled for May 21 and 28 in Honolulu.



The North Pacific short-tailed albatross population used to number in excess 5 million birds but was driven to near-extinction around the turn of the century by feather hunters. Today the population includes more than 1,000 birds and is on the increase.
—Herman Gunask photo

Records from the past 60 years show that as many as 15 short-tailed albatross have been sighted in the Northwestern Hawaiian Islands. In late 1997 a short-tailed albatross was observed from a NOAA research vessel during a longline cruise north of the Hawaiian Islands. This bird did not interact with fishing gear, nor was it hurt in any apparent way by the vessel. This was the first at-sea observation of this species of albatross off the Hawaiian Islands. Although no short-tailed albatross have been reported taken in the Hawaii longline fishery, it is likely that longline vessels have encountered this albatross, albeit infrequently.

In the North Pacific, the Alaskan longline demersal fishery has a permissible take of four birds over a two-year period, but no take level has been developed for short-tailed albatross in the Hawaii fishery. A biological consultation needed to develop such a take rests with the U.S. Fish & Wildlife Service.

Industry Tackles "Tasteless Smoke" Treated Fish

Members of the Western Pacific Region fishery industry initiated a letter-writing campaign in April, hoping to press the Food and Drug Administration (FDA) and other agencies to address regulation of fish products treated with carbon monoxide (CO) or "tasteless smoke." The treatment enhances red pigments in the fish, giving it an artificially bright cherry red color. Because the treatment can give old fish the color of fresh fish, it poses unacceptable food safety risks to the public and threatens to harm consumer confidence. The treated fish products were recently introduced to the U.S. market but are banned in Japan, Canada, countries of the European Union and elsewhere.

The FDA considers use of CO treatment as unlawful because it is an unapproved food additive and economically adulterates fish products by making them appear of higher quality than they are. To get around the law, manufacturers are now treating fish with "tasteless smoke," which is none other than CO filtered from smoke. They argue that, since the FDA classifies smoke as a product generally accepted as safe (GRAS), CO derived as a byproduct of smoke is also GRAS.

Currently there are no analytical procedures that can be used to distinguish fish products treated with tasteless smoke and those treated with CO.

Since the purpose, end result and potential risks of CO and tasteless smoke are one in the same, the fishing industry argues that the FDA should ban both.

Bottomfish Fishery to be Limited Entry Only

Beginning June 14, 1999, only those vessels with a limited entry permit will be allowed to take or retain (possess) bottomfish management unit species from the Mau Zone, which begins at 161°E°20'W (just west of Niihau Island) and ends at 165°E°W (just west of Necker Island). These species include lehi, uku, white ulua (pauu), black ulua, blacktip grouper, hapuupuu, ehū, onaga, ambon emperor, redgill emperor, taape, yellowtail kalekale, opakapaka, yelloweye opakapaka, kalekale, gindai, butaguchi (pig ulua), kahala, lunartail grouper, alfonsin (kinmedai), rattfish (butterfish) and armorhead (kusakari tsubodai).

The Mau Zone became an open access area in 1989. Anyone who applied for a permit was given one and was allowed to bottomfish. Over time the vessels bottomfishing in this area increased to the point of having a potentially negative effect on the long-term health of the bottomfish stocks, as well as the economic returns to vessel operators. In March 1997, a two-year moratorium on issuance of new permits was established. The permanent limited entry program is designed to limit the number of vessels fishing in the Mau Zone, protect the fish stocks from overfishing and ensure a reasonable return to vessel operators.

Fishermen have until June 14, 1999, to apply with the National Marine Fisheries Service Pacific Island Area Office (NMFS PIAO) to be eligible to obtain a limited entry permit. A \$65 processing fee will be assessed with each application. Permits will be issued based on past participation in the Mau Zone bottomfish fishery. A weighted point system will determine who gets issued an initial permit. Fishermen who qualify for the permit will be required each year to make a minimum of five separate landings of at least 500 pounds of bottomfish per trip to retain their permit.

The final rule creating the limited entry program was published in the *Federal Register* on April 28, 1999. The rule contains additional information on eligible permit applicants who are corporations/partnerships, eligible permit applicants who currently do not own a vessel, permit holders who are unable to meet the annual permit renewal landing requirement, permit action appeals process, etc. The rule and application information can be obtained from the NMFS PIAO, 2570 Dole St., Honolulu, HI 96822; phone (808) 973-2937. The final rule can also be accessed on the Web at http://www.access.gpo.gov/su_docs/aces/aces140.html.

A Western Pacific Regional Recipe

This fresh fish recipe from Hawaii is by Barbara Gray and courtesy of the Hawaii Department of Business, Economic Development and Tourism.

Hawaiian Fish Stew

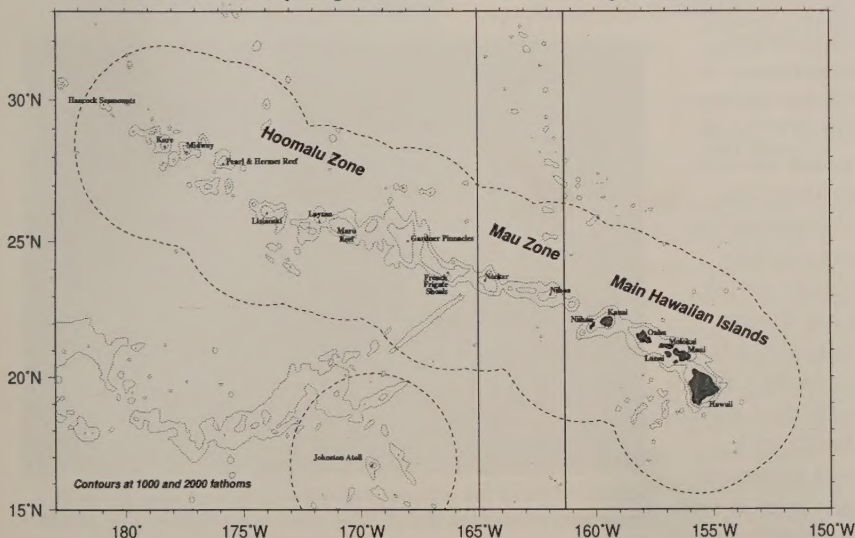
Ingredients:

- 1½ lbs. Hawaiian monchong
- 1½ lbs. any combination of ulua, mahimahi, ono, Hawaiian bottomfish or crustacean
- 2 oz. olive oil
- 8 oz. onion (coarsely chopped)
- 8 oz. bell pepper (coarsely chopped)
- 1 garlic clove (minced)
- 3½ lbs. whole tomatoes (coarsely chopped, drained)
- 8 oz. dry white wine
- 2 tsp. salt
- 1 tsp. fresh thyme (or ¼ tsp. dried)
- ¼ tsp. black pepper (coarsely ground)
- 2 bay leaves
- 1 tbsp. parsley (minced)

Directions:

Skin and bone fish; cut into 1-inch cubes. Heat olive oil in a large skillet and sauté onion, bell pepper and garlic until tender, about 2–3 minutes. Add tomatoes, white wine, half of the salt, thyme, black pepper and bay leaves; blend well. Bring to a boil, reduce heat and simmer, uncovered, for 15 minutes or until slightly thickened. Sprinkle fish cubes with remaining salt. Place fish on top of sauce. Simmer, covered, for 10–15 minutes or until fish flakes easily when tested with a fork. Sprinkle with minced parsley. Serves eight.

Hawaiian Archipelago and Bottomfish Management Zones



Only vessels with limited entry permits will be able to take or possess bottomfish from the Mau Zone of the Northwestern Hawaiian Islands beginning June 14, 1999.

100th Council Meeting to Take Up Reefs, Sharks, Seabirds



June 1999 marks the 100th Council meeting. The first Council convened in 1976 at the Pagoda Hotel in Honolulu. From the Council family album are members of that first Council: (1st row, from left) Isaac Ikehara, Frank Goto, Michio Takata, Wadsworth Y. H. Yee, Francisco Aguon, Richard Wass, Paul Bordallo. (2nd row, from left) Peter Fithian, Capt. John Caffrey, Floyd Anders, Peter Reid, Louis Agard Jr.

The Western Pacific Regional Fishery Management Council will face a full agenda when it convenes for its centennial meeting June 16–18 in Honolulu.

Among the highlights on Wednesday will be the first review of the draft Coral Reef Ecosystem Fishery Management Plan (FMP). When adopted, the FMP will be the fifth for the region, joining management plans for pelagics, bottomfish, crustaceans and precious corals.

Other topics to be addressed on day one are enforcement, including the transport of illegal immigrants on foreign fishing vessels; vessel monitoring systems (VMS), including a proposal to expand VMS to include all foreign vessels entering any U.S. port in the Western Pacific Region; and native and indigenous fishing rights, including an advisory panel recommendation that the Council initiates efforts to have the Endangered Species Act amended to allow for the take of green sea turtles for cultural purposes in American Samoa, Guam, Hawaii and the Northern Mariana Islands.

On Thursday, the Council will hear the results of its socioeconomic study of shark finning in the Western Pacific

Region and decide on action to be taken. The practice has been strongly attacked locally and nationally, and a Hawaii bill requiring that sharks landed in the state be whole or headed and gutted was deferred in part because of the upcoming report. A report on shark utilization worldwide, with emphasis on utilization of the oceanic blue shark, will also be presented.

The Council will also hear the results of its mitigation project on longline-seabird interaction and decide on regulatory action to be taken. Proposed measures range from area and/or seasonal closures to mandatory night setting and bait dyeing.

Also slated for day two are a discussion on the Council's authority with respect to remote insular areas as well as the Northwestern Hawaiian Islands; longliner interac-

tions with green sea turtles, including mitigation possibilities; the results of an akule and opelu study, which indicates the stocks are in good shape, and the status of a bigeye and yellowfin tuna tagging project around the Hawaiian Islands.

On Friday, the members will review the latest genetic results of ehu and onaga in the main and Northwestern Hawaiian Islands to determine if each species comprises one or more stocks. If each is from a single stock, the snappers will be removed from the national list of overfished species. Other bottomfish issues to be addressed are efforts to move the grouper *hapuupuu* out of the stressed species status, measures to monitor overfishing, species to be added as bottomfish management unit species and an environmental impact statement for the Bottomfish FMP.

The Council will discuss possible changes to its Precious Corals FMP, including establishing a minimum size for black coral and restricting the types of gear that can be used for harvesting precious corals.

During the three-day meeting,



Efforts to move the grouper *hapuupuu* (pictured above) out of the stressed species status have been overshadowed by action regarding the ehu and onaga. At its centennial meeting, the Council will review the latest genetic results of these snappers to see if they can be removed from the national list of overfished species.

Commission to Manage Central-Western Pacific Tuna Moves Forward

there will be numerous opportunities for public participation, including a Fishermen's Forum entitled "Are You an *Effective* Player in the Fishery Management Game."

The Council meeting is being preceded by a series of advisory panel and plan team meetings that run April through May, the Scientific and Statistical Committee meeting May 18–20, an informational meeting with longliners regarding seabird-interaction mitigation measures on May 21 and the Standing Committee meetings on June 15.

100th Council Meeting

Ala Moana Hotel
410 Atkinson Road
Honolulu, Hawaii
Phone: (808) 955-4811
Fax: (808) 944-2974

Tuesday, June 15

7:30 a.m.–6 p.m.

Standing Committee Meetings

Wednesday, June 16

8:30 a.m.–5 p.m.

Introductions
Approval of Agenda
Approval of 99th Meeting Minutes
Island Reports
Enforcement
Vessel Monitoring Systems
Ecosystems and Habitat
Native Rights and Indigenous Fishing Issues

Thursday, June 17

8:30 a.m.–5 p.m.

Pelagic Fisheries
Fishermen's Forum

Friday, June 18

8:30 a.m.–5 p.m.

Bottomfish Fisheries
Precious Corals Fishery
Crustaceans
Program Planning
Administrative Matters
Other Business

The fourth meeting in the Multi-lateral High-Level Conference (MHLC) on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific met in Honolulu Feb. 10–19.

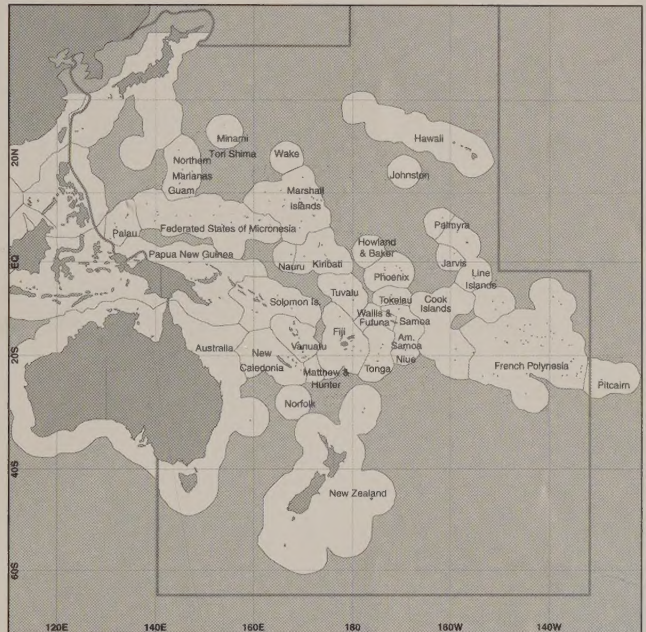
This series of high-level meetings aims

to establish a management commission for tunas and tuna-like species by the year 2000. Participants are the Pacific Island nations and territories, whose exclusive economic zones contain much of the Pacific's tropical tuna resource, and the metropolitan fishing nations from the Pacific Rim that target these tunas, including the United States, Japan, Korea, Chinese Taipei, China, Philippines and Indonesia.

Agreement was reached at the meeting to include Canada, and observer status was granted to Mexico and the European Union.

Conference participants agreed to the area of management competence, functions of the management commission, provision of scientific advice and review thereof, and the relationship with fishery organizations managing nearby waters. A resolution for member states to exercise restraint in the expansion of fishing capacity in the central and western Pacific was also adopted.

Issues on which progress but not agreement was made include flag state duties, compliance, vessel boarding, port duties, regional observer program and transshipment regulations. Other issues to be resolved are commission financing, decision-making proce-



One of the first and most important functions of the new commission will be the setting of total allowable catches for skipjack, yellowfin, bigeye and South Pacific albacore tunas in its management area. The eastern boundary of the area runs along the 150°W longitude to just below the equator, where it extends to 130°W to include French Polynesia. The southern boundary is just below 60°S, and the western boundary runs along the eastern coastlines of Indonesia, Philippines and Taiwan. The northern boundary is 50°N except near Japan where it is at 40°N to exclude certain high seas fisheries.

dures, regional vessel monitoring system program, a subcommittee on northern stocks in the management area and the special requirements of developing states.

MHLC5 is scheduled for September 1999 in Honolulu. Two or three meetings thereafter are expected to resolve all outstanding issues before the establishment of the commission.

COUNCIL CALENDAR

MAY

- 18-20** 71st Scientific and Statistical Committee Meeting
Council Conference Room
Honolulu, Hawaii
- 24-27** 50th Tuna Conference
University of California's Conference Center
Lake Arrowhead, California

JUNE

- 3-9** 63rd Annual Inter-American Tropical Tuna Commission Meeting
Manta, Ecuador
- 11-12** Aquatics Conference—Wai to the Kai
Kokokahi YWCA
Kaneohe, Hawaii
- 15-18** 100th Council Meeting
Ala Moana Hotel
Honolulu, Hawaii
- 15-19** PACON Conference '99 Regional Symposium
Moscow, Russia

- 16-23** Secretariat of the Pacific Community, 12th Standing Committee on Tuna and Billfish Meeting
Tahiti, French Polynesia
- 22-24** Coral Reef Ecosystem Plan Team (tentative)
Honolulu, Hawaii
- 28-30** Regional Fishery Management Council Chairs/Executive Directors Meeting
Newport, Rhode Island

JULY

- 24-30** Coastal Zone '99 Conference
San Diego, California

AUGUST

- 9-13** Secretariat of the Pacific Community, 1st Heads of Fisheries Meeting
Noumea, New Caledonia

SEPTEMBER

- 1-3** Coral Reef Ecosystem Plan Team/Ecosystem & Habitat Advisory Panel
Council Conference Room
Honolulu, Hawaii
- 3-15** Multi-lateral High Level Conference 5
Convention Center
Honolulu, HI
- 16-21** 89th Annual International Association of Fish & Wildlife Agencies Conference
"A Bridge to the New Century—The Changing Face of Fish & Wildlife Organizations"
Killington Grand Hotel
Killington, Vermont
- 28-Oct. 2**
1999 National Fisheries Institute Annual Convention
Hotel Inter-Continental
Miami, Florida

Pacific Islands Fishery News

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